

Clean Versions of Replacement Claims

Please cancel claims 1-15 and add the following new claims.

23. A magnetic memory, comprising:

array of magnetic memory cells each having a sense layer for storing a magnetization state;

structure that runs continuously along a subset of the magnetic memory cells in a line of the array, the structure having a U-shape and a proximity to the sense layers in the line which provides a flux closure path that directs demagnetization fields away from a pair of edge regions of each sense layer in the line, the structure having an easy axis that is substantially perpendicular to an easy axis of each sense layer in the line.

24. The magnetic memory of claim 23, wherein the structure overlaps the edge regions of the sense layers in the line and prevents one or more demagnetization fields from forming in the edge regions of the sense layers in the line.

25. The magnetic memory of claim 23, wherein the structure is formed from a permeable ferromagnetic material having a shape that provides flux closure for one or more demagnetization fields in the sense layers in the line.

26. The magnetic memory of claim 23, wherein the structure encases a conductor that provides read and write access to the magnetic memory cells in the line.

27. The magnetic memory of claim 23, further comprising a reference layer and a tunnel barrier between the sense layer and the reference layer of each magnetic memory cell.

28. The magnetic memory of claim 27, wherein the sense layers in the line are adjacent to the structure.

29. The magnetic memory of claim 27, wherein the reference layers in the line are adjacent to the structure.

30. The magnetic memory of claim 23, wherein the sense layers in the line are exchange coupled to the structure.

31. The magnetic memory of claim 23, wherein the structure is formed from a hard ferromagnetic material.

32. The magnetic memory of claim 31, wherein the hard ferromagnetic material is magnetized perpendicular to the easy axis of each sense layer in the line.

33. The magnetic memory of claim 31, wherein the sense layers in the line are exchange coupled to the structure.